

REMARKS

The Examiner is thanked for the thorough examination and search of the subject patent application.

Claims 15, 17, 27 and 30 are pending. Claims 15, 17, 27 and 30 are currently amended. Claims 1-14, 16, 18-26, 28-29, and 31-32 have been canceled.

Response to Claim Rejections under 35 U.S.C. 102

Applicants respectfully traverse the rejections for at least the reasons set forth below.

Response to Claims 15 and 17

As currently amended, independent Claim 15 is recited below:

15. A method for fabricating a semiconductor wafer with a patterned contact point comprising gold, comprising:
cleaning said patterned contact point, wherein said cleaning said patterned contact point comprises ion milling.

Reconsideration of the rejection of Claims 15 and 17 rejected under 35 U.S.C. 102(b) as being anticipated by Tsukamoto et al. (U.S. Pat. 5,554,859) is requested based on the following paragraph.

Applicants respectfully assert that the method claimed in Claim 15 patentably distinguishes over the citation by Tsukamoto et al. (US5,554,859).

Tsukamoto et al. teach a method for a semiconductor wafer comprising forming a gold film, patterning the gold film using a lithography process, and etching the gold film to a desired shape by Ar ion milling. *~ See Fig. 3B and col. 19, lines 17-23 ~*

Tsukamoto et al. teach Ar ion milling process is used for etching a gold film to a desired shape, but fail to teach a patterned contact point comprising gold could be cleaned, as claimed in Claim 15.

The Examiner considers that “The ion milling process of Tsukamoto does disclose cleaning the patterned contact point or metal bump at least because the process removes extraneous undesired gold layer in order to form the desired shape”. *~ See lines 4-6 in point 3, on page 3, in the last Office Action mailed Dec. 14, 2006 ~*

The above Examiner’s statement seems to be broadly interpreted because “to remove extraneous undesired gold layer in order to form the desired shape” cannot be defined as “to clean a patterned contact point”. It is believed that those skilled in the art understand the process of “cleaning a patterned contact point” does not mean to form a desired shape of a patterned circuit layer but typically means to remove micro contaminants from a patterned circuit layer.

As a result, withdrawal of rejection to Claim 15 under 35 U.S.C. 102 (b) is respectfully requested.

For at least the foregoing reasons, applicants respectfully submit independent Claim 15 patentably distinguishes over the prior art references, and should be allowed. For at least the same reasons, dependent Claim 17 patentably defines over the prior art as well.

Response to Claims 27 and 30

As currently amended, independent Claim 27 is recited below:

27. A method for fabricating a semiconductor wafer, comprising:
 depositing a patterned metal bump on a topmost patterned circuit layer of said semiconductor wafer, wherein said patterned metal bump has a substantially flat top surface;
and
 cleaning said patterned metal bump, wherein said cleaning said patterned metal bump comprises ion milling.

Reconsideration of the rejection of Claims 27 and 30 rejected under 35 U.S.C. 102(b) as being anticipated by Tsukamoto et al. (U.S. Pat. 5,554,859) is requested based on the following paragraph.

Applicants respectfully assert that the method claimed in Claim 27 patentably distinguishes over the citation by Tsukamoto et al. (US5,554,859).

Tsukamoto et al. teach a method for a semiconductor wafer comprising forming a gold film, patterning the gold film using a lithography process, and etching the gold film to a desired shape by Ar ion milling. ~ See Fig. 3B and col. 19, lines 17-23 ~

Tsukamoto et al. teach Ar ion milling process is used for etching a metal film to a desired shape, but not for cleaning a patterned metal bump. Tsukamoto et al. fail to teach, hint or suggest that a patterned bump could be cleaned, as claimed in Claim 27.

The Examiner considers that “The ion milling process of Tsukamoto does disclose cleaning the patterned contact point or metal bump at least because the process removes extraneous undesired gold layer in order to form the desired shape”. ~ See lines 4-6 in point 3, on page 3, in the last Office Action mailed Dec. 14, 2006 ~

The above Examiner’s statement seems to be broadly interpreted because “to remove extraneous undesired gold layer in order to form the desired shape” cannot be defined as “to clean a patterned contact point”. It is believed that those skilled in the art understand the process of “cleaning a patterned contact point” does not mean to form a desired shape of a patterned circuit layer but typically means to remove micro contaminants from a patterned circuit layer.

As a result, withdrawal of rejection to Claim 27 under 35 U.S.C. 102 (b) is respectfully requested.

For at least the foregoing reasons, applicants respectfully submit independent Claim 27 patently distinguishes over the prior art references, and should be allowed. For at least the same reasons, dependent Claim 30 patently defines over the prior art as well.

CONCLUSION

Some or all of the pending claims are now believed to be in condition for allowance. Accordingly, allowance of the claims and of the application as a whole is respectfully requested.

It is requested that should the Examiner not find that the Claims are now Allowable that the Examiner call the undersigned at 845-452-5863 to overcome any problems preventing allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'SBA', with a long horizontal flourish extending to the right.

Stephen B. Ackerman, Reg. No. 37,761